

What is claimed is :

1. A cylindrical straight slab type gas laser comprising :

a pair of cylindrical electrodes of different diameter disposed vertically and concentrically with the gap between the cylindrical electrodes filled with laser medium to define a cylindrical straight slab,

a ring-shaped trick mirror disposed at one end of the cylindrical straight slab,

an output mirror disposed at the center of the one end of the cylindrical straight slab in such a manner to pass a part of the light and to reflect a part of the remaining light, and

a w-axicon mirror disposed at the other end of the cylindrical straight slab,

characterized in that no spacers are disposed between the two cylindrical electrodes.

2. A cylindrical straight slab type gas laser of claim 1, wherein the two cylindrical electrodes are made, from ferromagnetic material that is magnetized to form two or more cylindrical permanent magnetic poles, and the two cylindrical electrodes are disposed in such a manner that the inner and outer cylindrical permanent magnets repel to one another.

3. A cylindrical straight slab type gas laser of claim 1 or 2, wherein the output laser beam from the output mirror has substantially Gaussian intensity distribution when it is focussed by a lens.

4. A cylindrical straight slab type gas laser of claim 1, 2 or 3, wherein the output laser beam is applied to cutting machines and the like.